

642-113

Gaucho!

Dart Aerospace Ltd.

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SKIDTUBE ASSEMBLY, 206 A/B LOW
 Job Number : 46562A
 Estimate Number : 13807
 P.O. Number :
 This Issue : 23/03/2009 S.O. No. :
 Prsht Rev. : NC
 First Issue : / / Type : SKIDTUBES
 Previous Run : 46561A
 Part Number : D206642147 151900 ECN 09-54
 Drawing Number : D3804 REV.A
 Project Number : N/A
 Drawing Revision : A
 Material :
 Due Date : 10/04/2009 Qty: 1 Um: Each
 Written By :
 Checked & Approved By : 50090323
 Comment : Est Rev:A 09-03-06 new issue DD verified by:EC
 Est Rev:B 09-03-10 add sub assembly D206-642-149 DD
 verified by:EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs

DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D206-642-147 CHG001 N/A

2.0 D2620 Skidtube, 206 Skidtube



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2620 Bent Tube 3" OD B31032 9-4-7

3.0 D32861 Doubler



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 D3286-1 Doubler B46440 9-4-7

4.0 D2647 Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2647 Fwd Cap B43846 09/04/02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642147/51

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs
LANDING GEAR RESOURCE 1

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod M109213 / M110676 BE 9-4-2

4-Grind weld flush to cap on top surface only. BE 9-4-2

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt 8166 (A,B & C).

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 40 drill, spot drilling doubler at the same time.

11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove and Deburr D3286-1 doubler

13-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

14-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

15-Remove indexing edge using DT8741 as per Dwg D3804

16-C'sink GHW rivet holes as per Dwg D3804

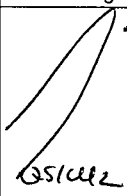

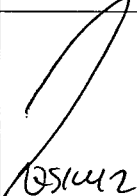

Handwritten: 9-4-2

Handwritten: 9-4-7

Handwritten: P10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206642-151 PAR #: NA Fault Category: Prod/FAB LRS NCR: Yes No DQA: D Date: 09/05/11
 Resolution: Re-work Disposition: Re-work QA: N/C Closed: D Date: 09/05/11

NCR: <u>46562A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09/04/07	5.11	Qty 1 hole was ovalized to 0.155" oval during drilling. due to Accumulation S.S. R.C: process / touchy.		Cell affected hole with weld per QSI act. Ensure no weld buildup inside the tube	BE 09/04/08 n 4-4-8			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642147 151

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC6

DIMENSIONAL CHECK



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs
DIMENSIONAL CHECK

Sorlos

7.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs
LANDING GEAR RESOURCE 1

1-Open crossbolt holes to 0.3125"

2-Open Aft cap hole #6.

****no wearplate holes for this skidtube****

3-Deburr tube and blow out chips from inside the tube

) H 9-4-8

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs
HAND FINISHING RESOURCE #1
Chemical Conversion Coat as per QSI 005 4.1

D H 9-4-8

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs
INSPECT POWDER COAT/CHEMICAL CONVERSION

DP 9-4-8

10.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs
LANDING GEAR RESOURCE 1

1-Open holes to finished size as per Dwg D3804, (without cutting fluid)

2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)

3-Deburr and blow out all chips from inside the tube

DP 9-4-8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D20664247 151

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC6

DIMENSIONAL CHECK



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs
DIMENSIONAL CHECK

6 09/04/13 @

12.0

CR3212404

Cherry Rivet



Comment: Qty.: 52.0000 Each(s)/Unit Total : 52.0000 Each(s)

Pick:

Qty Part Number Description Batch

52 CR3212-4-04 Rivet M 111359

52

9-4-8

13.0

D26541

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Web

batch:

B 46636

D

M 9-4-8

14.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs
LANDING GEAR RESOURCE 1

1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

2-Bond D2654-1 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 9-4-9 Time: 9.10

Finish Date: 9/4/13 Time: 7.00am

9-4-8

M 9-4-9

Pick:

Qty Part Number Description Batch

A/R Sikaflex-291 M 111081

Sikaflex expire date: 0-1-1

SEE W/D
CHG

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs
INSPECT WORK TO CURRENT STEP

8 09/04/13 @

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
09.04.08	14	DRILL ADDITIONAL Ø 0.500 HOLE TO MATCH HOLE IN SKID TUBE. REF ATTACHED DED.		H 9-4-07		CP 09.04.08 QSP/042	S 09/04/08

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642447 151

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

D2649

Cross Bolt Spacer



Comment: Qty.: 19.0000 Each(s)/Unit Total : 19.0000 Each(s)

Pick:

Qty Part Number Description Batch

19 D2649

Crossbolt spacer

245317

BE 09/04/13

17.0

D32863

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 D3286-3

Spacer

243862

BE 09/04/13

18.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs
LANDING GEAR RESOURCE 1

1-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod

M109213

BE 09/04/13

2-Grind welds flush as per Dwg D3804.

M 9-4-15

3-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod

NONE

BE 09/04/13

4-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

M 9-4-15

19.0

CCR264SS33

Cherry Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 CCR264SS3-3 Rivets

M10625

2

M 9-4-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642447 151

Job Number:



Seq. #:

Machine Or Operation:

Description :

20.0

CR3212403

Cherry Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Cherry Rivet

batch: M110139

②

M

9-4-15

21.0

D2680041

Nut Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2680-041

Nut Plate

B 33061

①

M 9-4-15

22.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs

HAND FINISHING RESOURCE #1

Install D2680-041 Nut Plate as per Dwg D2650

M 9-4-15

23.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs

Counterbore work to Current Step . Inspect for foreign objects as per QSI 024

802/04/15 (x)

24.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs

VISUAL INSPECTION OF GROUND WELDS

802/04/15 (x)

25.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs

HAND FINISHING RESOURCE #1

Pressure wash as per QSI 005

FD 09/04/24 ①

26.0

POWDER COATING

POWDER COATING



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs

POWDER COATING

Powder Coat White Gloss (Ref. 4.3.5.1) as per QSI 005 4.3. Make sure Nut Plate Thread is protected using paint screw, and mask GHW studs.

M110939

FD 09-04-27 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642447 (51)

Job Number:



Seq. #:

Machine Or Operation:

Description :

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

11:50
320
12:20

BR 09-04-27 (1)

27.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs

INSPECT POWDER COAT/CHEMICAL CONVERSION

FL 09/04/29 (1)

28.0

D3805041

Wearplate Assembly Fwd, Low Gear



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Wearplate Assembly Fwd, Low Gear

batch: 046564

FL

29.0

D3805045

Wearplate Assembly Aft, Low Gear



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Wearplate Assembly Aft, Low Gear

batch: 046565

FL 09/04/29 (1)

30.0

AN337A

Bolt



Comment: Qty.: 7.0000 Each(s)/Unit Total : 7.0000 Each(s)

Bolt

batch: 105425

SS 09/04/29 (1)

31.0

AN960JD10

Washer



Comment: Qty.: 7.0000 Each(s)/Unit Total : 7.0000 Each(s)

Washer

batch: M110985

SS 09/04/29 (1)

32.0

MS21042L3

Nut



Comment: Qty.: 7.0000 Each(s)/Unit Total : 7.0000 Each(s)

Nut

batch: M110844

SS 09/04/29 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	-Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642147151

Job Number:



Seq. #:

Machine Or Operation:

Description :

33.0

D38731

Bushing



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Bushing

batch:

B46568 x1 B46757 x13

JS 09/04/29 (x1)

34.0

AN960JD416

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Washer

batch:

110363

JS 09/04/29 (x1)

35.0

D26511

Plug



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick:

Qty Part Number

Description Batch

6 D2651-1

Plugs

043990

FL

36.0

D26513

O-Ring



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick:

Qty Part Number

Description Batch

6 D2651-3

O-Rings

043849

FL

37.0

MS27039406

Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 MS27039-4-06 Screw

M109061

JS 09/04/29 (x1)

38.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs

HAND FINISHING RESOURCE #1]

1- install RUN-ON LANDING WEARPLATE KIT as per dwg

2- Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804.

Clean excess adhesive.

FL 09/04/29 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642147 151

Job Number:



Seq. #:

Machine Or Operation:

Description :

39.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2646

Aft Cap

546327

FL

40.0

MS27039108

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 MS27039-1-08 Screw

110552

FL 09/04/29 (X)

41.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 AN960JD10L Washer

M69632

FL 09/04/29 (X)

42.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs

HAND FINISHING RESOURCE #1

1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive

A/R Sikaflex-291

Sikaflex expire date:

M 11/08/17
10/20

2-Wing Walk as per Dwg D3804 and QSI 005 4.4

Batch: M 11/01/13

FL 09/04/29 (1)

43.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs

INSPECT POWDER COAT/CHEMICAL CONVERSION

0905-08 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 23/03/2009 3:52:59 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY, 206 A/B LOW

Job Number: 46562A

Part Number: D206642147 151

Job Number:



Seq. #:

Machine Or Operation:

Description :

44.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs

INSPECT WORK TO CURRENT STEP

inspect for foreing objets as per QSI 024

2005-08 @

45.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: Setup: 0.00Hrs/ Run: 0.0000Min Total Run : 0.0000Hrs

PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-642-147

Location:

PPP Rev:

146562

Cg/5/8

(1)

46.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: Setup: 0.00Hrs/ Run: 0.0000Hrs Total Run : 0.0000Hrs

FINAL INSPECTION/W/O RELEASE

09/05/11

Job Completion



MF 09-05-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

NO WORK ORDER
WITHOUT NOTICE
SUBJECT TO AMENDMENT
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY

RELEASED
UP 09.03.03
per ECN 09-538

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	97		
DRAWN	97		
CHECKED	97		
MFG. APPR.	97		
APPROVED	97		
DE APPR.	97		
DATE	08.07.07		

DART AEROSPACE USA, INC	
PORT HADLOCK, WA	
DRAWING NO.	REV. A
D3804	SHEET 1 OF 5
TITLE	SCALE
SKIDTUBE ASSEMBLY, 206A/B	NTS
COPYRIGHT © 2000 BY DART AEROSPACE USA, INC.	
THIS DOCUMENT IS PRELIMINARY AND UNCONTROLLED. IT IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Technical drawing of a mechanical part, likely a bracket or arm, showing dimensions and details. The drawing includes a top view and a side view. Key dimensions include overall length 104.1, width 5.0, and various radii and hole positions. Details A and B are shown as cross-sections of the part. A 'RELEASED' stamp is visible in the top right corner.

Dimensions:

- Overall Length: 104.1
- Overall Width: 5.0
- Radius: R30.0±1
- Distance from Centerline to Bend Tangent: 87.0
- Distance from Centerline to Hole Center: 21.00^{+0.030}/_{-0.000}
- Hole Diameter: Ø0.375 THRU 20 PL
- Distance from Centerline to Hole Edge: 7.00 FLAT
- Distance from Hole Center to End: 15.50
- Distance from Hole Center to End (Alternative): 10.00
- Distance from Hole Center to End (Alternative): 5.00
- Distance from Hole Center to End (Alternative): 30.900
- Distance from Hole Center to End (Alternative): 23.175
- Distance from Hole Center to End (Alternative): 15.450
- Distance from Hole Center to End (Alternative): 14.87
- Distance from Hole Center to End (Alternative): 7.725
- Distance from Hole Center to End (Alternative): 3.975
- Distance from Hole Center to End (Alternative): 5.225
- Distance from Hole Center to End (Alternative): 1.250
- Distance from Hole Center to End (Alternative): 6.500
- Distance from Hole Center to End (Alternative): 2.00 TO WEB

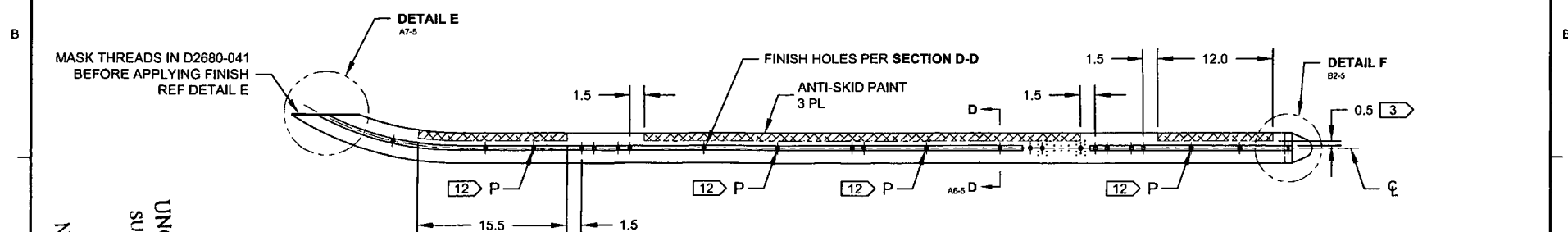
Details:

- DETAIL A C7-5**: Cross-section of the part showing the hole and the bend.
- DETAIL B C5-5**: Cross-section of the part showing the hole and the bend.

Other Labels:

- D2654-3 WEB
- NO CBORE THIS HOLE ON EITHER SIDE
- 17.1 REF
- 10
- 11
- RELEASED

D3804-043 BENDING/DRILLING DETAIL



D3804-043 ASSEMBLY/FINISHING DETAIL

SHOP COPY

RETURN TO
ENGINEERING
CONTROL CENTER
AFTER 1000 HRS

14057021

D3804-043 ASSEMBLY/FINISHING DETAIL

DESIGN	93
DRAWN	93
CHECKED	93
MFG. APPR.	93
APPROVED	93
DE APPR.	93
DATE 08.07.07	

DART AEROSPACE USA, INC
PORT HADLOCK, WA

REV. A
SHEET 3 OF 5

DRAWING NO. D3804

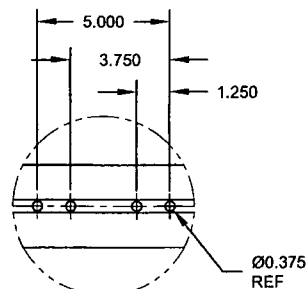
TITLE SKIDTUBE ASSEMBLY, 206A/B

SCALE

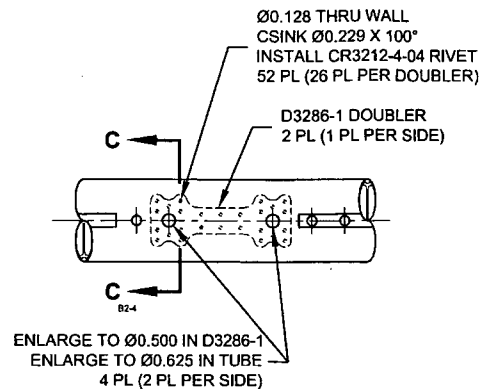
NTS

COPYRIGHT © 2008 BY DART AEROSPACE USA, INC
THIS DOCUMENT IS PREPARED FOR THE DART AEROSPACE USA, INC
AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE USA, INC

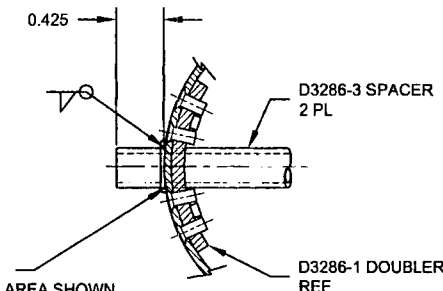
RELEASED
UP 09.03.05



DETAIL A D6-2
C2-2
D6-3
C2-3
SCALE NONE

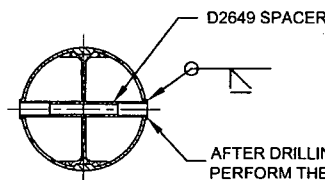


DETAIL B C3-2
C3-3
SCALE NONE



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH

SECTION C-C C6-4
PARTIAL SECTION
SCALE NONE



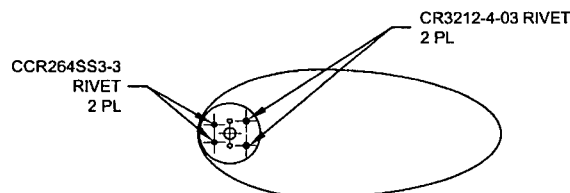
SECTION D-D A4-2
A4-3
FOR Ø0.375 HOLES ONLY
SCALE NONE

- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORER TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

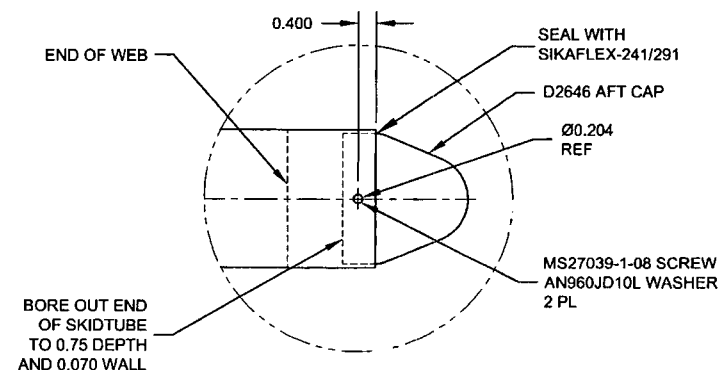
DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	4	PORT HADLOCK, WA	
CHECKED	4	DRAWING NO.	REV. A
MFG. APPR.	4	D3804	SHEET 4 OF 5
APPROVED	4	TITLE	SCALE
DE APPR.	4	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO ALL REVISIONS
WORK ORDER
47651028

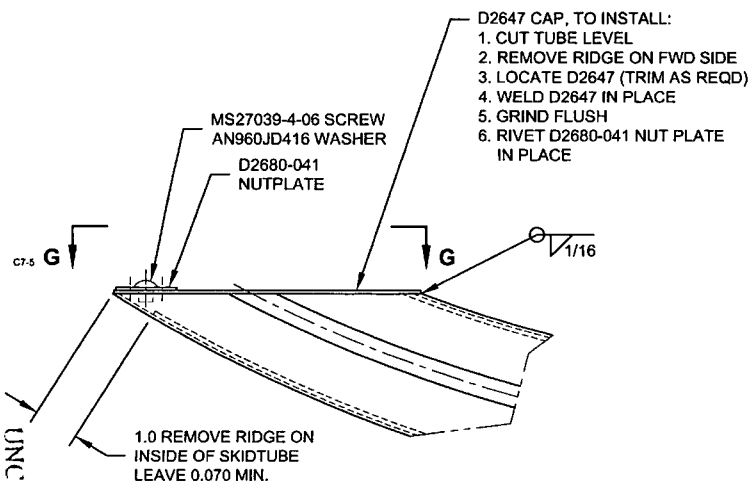
RELEASED
09 03 03



VIEW G-G
SCALE NONE A7-5



DETAIL F
SCALE NONE B2-2 B2-3



DETAIL E
SCALE NONE B7-2 B7-3

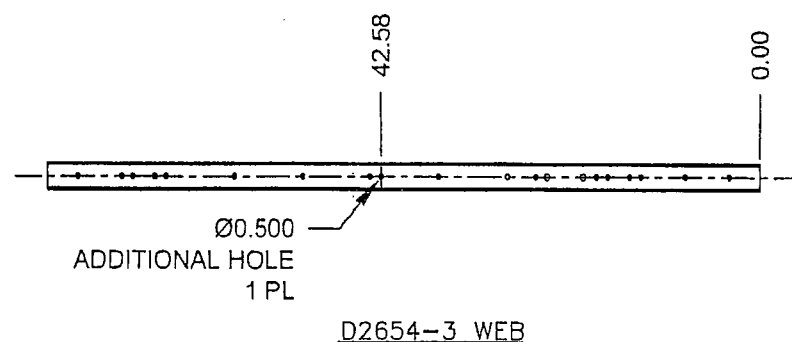
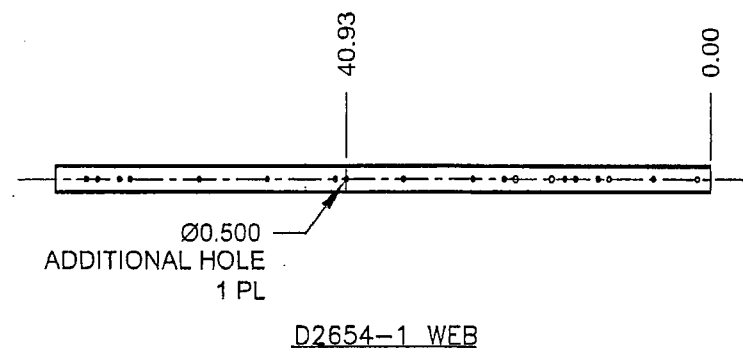
DESIGN	41	DART AEROSPACE USA, INC	
DRAWN	41	PORT HADLOCK, WA	
CHECKED	41	DRAWING NO.	REV. A
MFG. APPR.	41	D3804	SHEET 5 OF 5
APPROVED	41	TITLE	SCALE
DE APPR.	41	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2000 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

SHOP COPY
RETURN TO
FURNISHING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

NO 4106027

DRAWING NO. D2654	TITLE WEB	REV. E1	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D2654-E-2	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>PH</i>	MFG. APPR. <i>E</i>	APPROVED <i>MP</i>		DE APPR. <i>PH</i>		
DATE 09.03.11	DATE 09.03.11	DATE 09.04.03	DATE 09.04.03		DATE 09.04.03		

DRILL AN ADDITIONAL HOLE IN THE D2654-1 AND D2654-3 WEB AT THE LOCATION INDICATED:



THE ADDITIONAL HOLE IS REQUIRED FOR COMPATIBILITY WITH D3804-041/-043 SKIDTUBE ASSEMBLIES. ALL OTHER INFORMATION REMAINS UNCHANGED.

NO. 194

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 4637590
Part number: D206 WIA 147
Description: 206 skid
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Pet. Dial Date of Test Coupon 09-03-17
Welder Barclay Elliott Date of Test Coupon 09-03-17

The above named individual is qualified in accordance with AWS D17.1.2001 to weld